®

VERITAS NetBackup™
User's Guide
Macintosh
Release 3.2

Macintosh

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TRADEMARKS

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Preface

Introduction

This guide describes how to install, configure, and use the NetBackup Browser for Macintosh.

If you have another release of NetBackup, refer to the *NetBackup and Media Manager Release Notes - UNIX* that came with your software to determine the specific edition to use.

Audience

The system administrator, responsible for installing Veritas NetBackup on the server, will find this manual useful for configuring the Macintosh client. The Macintosh user will find the detailed operating instructions helpful.

Scope

This guide describes how to install Veritas NetBackup on a Macintosh. It describes how to configure the Macintosh client on the server. Also included are detailed instructions for using the NetBackup Browser on the Macintosh.

Organization

The information in this manual is organized as follows

- Chapter 1, "Introduction"

- Chapter 2, "Operating Notes"

- Chapter 3, "Using NetBackup Browser"

- Chapter 4, "Reference"

In addition to these chapters, there is a glossary of terms that you may encounter when using and discussing NetBackup.

Using This Guide

- Chapter 1, "Introduction" contains installation requirements for the NetBackup Macintosh Browser, instructions for installing NetBackup on the Macintosh client, and instructructions for configuring the NetBackup Server.

- Chapter 2, "Operating Notes" describes performance issues important for this application.

- Chapter 3, "Using NetBackup Browser" describes how NetBackup is used by the system administrator and by the Macinitosh user.

- Chapter 4, "Reference" provides information about the operation and use of NetBackup Macintosh client software.

Related Documents

The following documents provide related information. For a more detailed listing of NetBackup documents, refer to *NetBackup and Media Manager Release Notes - UNIX* or *NetBackup Release Notes - Windows NT Server.*

- *NetBackup Installation Guide - PC Clients*

  Gives you the information you need to install and quickly get NetBackup PC client software installed and running. The PC clients are Windows NT, Windows 95, Windows 98,Macintosh, OS/2 Warp, and Novell NetWare. This is the first document that you should read after opening the NetBackup PC client package.

If you have a Unix server, refer to these documents:

- *NetBackup and Media Manager Release Notes - UNIX*

  Explains how to install UNIX NetBackup server and client software and also provides other important information such as the platforms and operating systems that are supported and operating notes that may not be in the manuals.

- *NetBackup System Administrator's Guide - UNIX*

  Explains how to configure and manage NetBackup on a UNIX system.

- *NetBackup Troubleshooting Guide*

  Provides troubleshooting information for all NetBackup products.

If you have a Windows NT server, refer to these documents:

- *NetBackup Release Notes - Windows NT Server*

  Provides important information about Windows NT NetBackup server software, such as the platforms and operating systems that are supported and operating notes that may not be in the manuals or the online help.

- *NetBackup System Administrator's Guide - Windows NT Server*

  Explains how to configure and manage NetBackup on a Windows NT server system.

Conventions

The following explains typographical and other conventions used in this guide.

Type Style

The following table describes the typographic conventions used in this guide.

Typeface	Usage	Examples

`courier`	Computer output; user input; names of commands, files, and directories	`You have mail.`
		
		The `mkdir` command creates a new directory.
		
		`mkdir new`

italics	New terms; document titles; words to be emphasized; variables to be substituted with a real name or value	`mkdir` *filename* Refer to the *User's Guide* for details.
bold	Glossary terms	

Notes and Cautions

Note: This is a Note and is used to call attention to information that makes it easier to use the product or helps you to avoid problems.

CAUTION! This is a Caution and is used to warn you about situations that can cause data loss.

Keyboard Sequences

Some keyboard command sequences use two or more keys at the same time. For example, you may have to hold down the Ctrl key before you press another key. When this type of command is referenced, the keys are connected by hyphens. For example, Ctrl-t.

Command Usage

The following conventions are frequently used in the synopsis of command usage.

brackets [ ]

>   The enclosed command line component is optional.

Vertical bar or pipe (|)

>   Separates optional arguments from which the user can choose. For example, when a command has the following format:

>   command [*arg1* | *arg2*]

>   the user can use either *arg1* or *arg2.*

Getting Help

For license information or information about VERITAS service packages, contact VERITAS Customer Support.

US Customers: 1-800-342-0652

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support@veritas.com

Introduction 1

You can start backups, archives and restores directly from a NetBackup client, without logging into the NetBackup server. After a user-directed operation is started, it runs under control of the NetBackup server. You request the service and the server manages the rest, including storage and retrieval of data.

• Backup and Archive

• Restore

Backup and Archive

A backup saves copies of selected files and directories from a NetBackup client to a storage device on a NetBackup server.

An archive saves copies of selected files and directories to a storage device on a NetBackup server, then deletes the original files from the client.

Special Features

NetBackup special backup and archive features include the following:

- NetBackup will allow you to select the NetBackup server that you want for user-directed backups.

- NetBackup will allow you to view and select files and directories from the file systems on the client.

File Permissions

The Macintosh client generally will backup files that are open by other processes. There are exceptions for files in shared directories or on remote volumes.

User-directed Backups

During configuration, the administrator on the NetBackup server defines time periods when backup and archive requests from your computer can be performed. NetBackup permits user-directed operation during time periods scheduled by the system administrator.

Note: Full and incremental backups can only be performed by a scheduled backup from the NetBackup server.

Administrator Controlled Backups and Archives

The NetBackup administrator can schedule full backup and incremental backups that occur automatically and unattended, under control of the NetBackup server. When properly scheduled, the server directed backups will meet most of your backup requirements.

Note: Some applications retain locks on files when left open during an administrator controlled backup. The result is a partially successful backup. To avoid this problem, shut down all applications on the client computer before administrator controlled backups.

There are three kinds of backups:

A **full backup** copies to a storage unit all files and directories that are beneath a specified directory. The archive bit for each file is cleared as the file is backed up. If a full backup fails, NetBackup attempts it at the same time each day until a full backup is successfully complete. This successfully completed backup will include files whose archive bit had been cleared during the failed backup.

A **cumulative incremental backup** backs up all files that have changed since the last successful full backup. Incremental backups can be configured to use either the datetime stamp or the archive bit. If the datetime stamp is used, each incremental backup is relative to the previous full or incremental backup. If the archive bit is used, each incremental backup is relative to the previous full backup.

A **differential incremental backup** backs up all files that have changed since the last successful incremental or full backup.

Restore

A restore reads backed up or archived copies from the storage device on the NetBackup server and restores them to the client.

Special Features

NetBackup gives the user the ability to select which files will be restored. NetBackup supports the following ways to restore a backup:

An **alternate client restore** restores files or directories to a different client than the one from which they were backed up. This is possible only if the NetBackup administrator sets up the configuration to allow it. The administrator on the NetBackup server can direct restores to any NetBackup client (regardless of which client the files came from).

A f**ull restore** restores a directory from a range of backups. The restored directory includes all the files that were backed up during the range of backups. The restored directory will also include files that were deleted from the local disk during the specified time period.

A **true-image restore** restores the contents of a directory to what it was at the time of any scheduled full backup or incremental backup. The restored directory will contain only the files that existed in it at the time of a specified full backup or incremental backup. Files that were backed up but then deleted from the local disk prior to the specified time are not included. The configuration on the NetBackup server must specify true-image backups for your client in order for you to perform true-image restores.

Some other NetBackup special restore features include the following:

• NetBackup allows you to select the NetBackup server from which to perform user-directed restores.

• NetBackup allows you to view the backup history for your client or for other clients that were backed up by your client and select items to restore.

File Permissions and Open Files

File permissions require write permission on the destination directory in order to restore a file. NetBackup will restore a file, even when an existing file has an identical name. The old file is moved to the Trash.

Operating Notes   2

This section provides information about the operation and use of NetBackup Macintosh client software.

- Performance Considerations

- Memory Considerations

- AppleShare IP Considerations

- Current Limitations

- File Systems Supported

- Archive Format

- Why DNS is Required

Performance Considerations

- Not surprisingly, the faster your Macintosh processor, the better throughput you can expect. Generally, a Power PC will be faster than a 68040, and a 68040 will be faster than a 68030.

- Compression can have a dramatic negative impact on performance. Typically on a PowerPC Mac, backups take two to three times longer with compression turned on. On a 68020 Macintosh, backups take five to ten times longer with compression turned on.

- True Image Recovery (TIR) can have a negative impact on performance. This is most noticeable during incremental backups.

- Usually, you see better throughput backing up large files than small files. For example, a single 1 megabyte file will generally be backed up more quickly than 1000 files that total 1 megabyte in size.

- If you use the screen saver AfterDark, be certain to turn on the System IQ option in AfterDark's control panel. If System IQ is off, AfterDark uses too much of the Macintosh's CPU, which will slow down NetBackup.

Memory Considerations

- While waiting for requests from a server, the `NetBackupListen` extension uses about:
  - 260 kilobytes on a 680x0 or a PowerPC with virtual memory
  - 280 kilobytes on a PowerPC without virtual memory.

- To process a backup or restore request from the server, the `NetBackupBPCD` application needs:
  - 1300 kilobytes (minimum) to 2300 kilobytes (preferred) on a 680x0 or a Power PC with virtual memory.
  - 1500 kilobytes to 2500 kilobytes on a Power PC without virtual memory

- The minimum memory partition is usually sufficient for `NetBackupBPCD` to complete uncompressed backups and restores. The preferred memory partition is usually required for `NetBackupBPCD` to complete compressed backups and restores.

- If `NetBackupBPCD`'s memory partition is less than its preferred value, `NetBackupBPCD` performs an uncompressed backup even if the server requested a compressed backup.

AppleShare IP Considerations

There is a bug in some versions of AppleShare IP that causes NetBackup to hang while attempting to backup and restore file sharing attributes. To work around this bug, you can set the "ignoresharing" `mac.conf` value to "1" on the Macintosh NetBackup client. See the description of ignoresharing in the "Editing Client Configuration Files" section of the *NetBackup Installation Guide - PC Clients.*

AppleShare IP will also use a lot of the Macintosh's CPU even when idle. To improve NetBackup's performance on a system with AppleShare IP, you should set the "nice" `mac.conf` value to "0" as described in the "Editing Client Configuration Files" section of the *NetBackup Installation Guide - PC Clients.*

It is also recommended that you configure OpenDoc to always run if you are using both AppleShare IP and NetBackup:

1. Open the OpenDoc Setup control panel.

2. Click on the Start OpenDoc at system startup button.

3. Click on the Stop OpenDoc at system shutdown button.

4. Click on the Start button if OpenDoc is not running.

This prevents the AppleShare IP Web & File Admin utility from hanging after NetBackup has run.

Current Limitations

- NetBackup for Macintosh can only process one request from a NetBackup server at a time.

  This means that two back up or restore operations cannot occur on the same Macintosh at the same time. If a server gets a `Connection Refused` or `Connection Timeout` error message from a Macintosh client, this probably means that another operation is in progress. This can also mean that the Macintosh isn't running or the Macintosh NetBackup software is not installed.

- Initial installations of NetBackup for Macintosh must be done with the NetBackup Installer on the target Macintosh.

  Initial installations of some other NetBackup clients can be done remotely from a NetBackup server through `ftp` or `rsh`. Since most Macintoshes do not have an `ftp` or `rsh` daemon, this is not an option for Macintoshes.

- Update installations of NetBackup for Macintosh cannot be done with the NetBackup 3.2 server software.

  A future release of the NetBackup server software will be able to perform update installations.

- Macintosh files with a name that includes the NUL character are not backed up. Typically these files are third-party extensions that need to run before any others. An example is the Virex Control Panel.

- If a Macintosh has two volumes with the same name, only one is backed up by NetBackup. Usually, the volume to be backed up is the first one mounted. For example, if your start-up disk is named `Macintosh HD` and you also have an external disk named `Macintosh HD`, NetBackup backs up only the start-up disk.

- Currently, Macintosh Creator and File Type attributes cannot be used in exclude and include lists. This will be addressed in a future release.

- Macintosh file names with non-ANSI characters may look different when viewed on UNIX or another non-Macintosh systems. For example, the bullet character (•), option-8, on a Macintosh appears as a yen character (¥) on a terminal that uses an ISO Latin-1 font.

File Systems Supported

- The Macintosh NetBackup client can back up or restore only a Hierarchical File System (HFS or HFS+) on a Macintosh. Most Macintosh hard disks, floppy disks, and AppleShare volumes use HFS. An example of a non-HFS file system is the Macintosh File System (MFS) that was used with 400K floppy disks on the original Macintosh in the mid-1980s.

- The Macintosh NetBackup client ignores locked volumes. Examples of locked volumes are CD-ROMs and floppy disks with the write tab set in the locked position.

- The Macintosh NetBackup client ignores off-line volumes. An example of an off-line volume is a floppy disk that is ejected through the Eject Disk menu.

- AppleShare volumes can be backed up if the Follow NFS mounts option is selected for the Macintosh's class on the NetBackup server.

- A floppy disk can be backed up if it has an HFS file system and its write tab is set in the unlocked position.

Archive Format

The format of the archive generated by the Macintosh NetBackup client is the same as the archive generated by a UNIX NetBackup client with one exception:

A UNIX NetBackup client appends a *Mangle Table* to the end of the archive but the Mac NetBackup client does not.

The GNU tar uses a Mangle Table to handle long path names. NetBackup software does not use the Mangle Table.

If you restore files from a Macintosh NetBackup archive onto a UNIX NetBackup client, each restored file will be in MacBinary format. A MacBinary file has a 128 byte header with Macintosh attribute information, followed by the data fork of the Macintosh file, followed by the resource fork of the Macintosh file. The MacBinary format is commonly used when transferring Macintosh files between non-Macintosh systems.

You can usually restore files from a UNIX NetBackup archive to a Macintosh NetBackup client. If you do this, however, there are some things to be aware of:

- Any slash (/) character in a Macintosh file or folder name maps to a colon (:) character in the UNIX path on the server.

  For example, suppose you have a file named Notes 95/09/30, in a folder named `My Stuff`, on a hard disk named `Macintosh HD`. That file must be specified in the file list as:

  `/Macintosh HD/My Stuff/Notes 95:09:30`
- Macintosh file and folder names are limited to 31 characters. UNIX file or directory names are truncated if they contain more than 31 characters.

- Unlike UNIX names, Macintosh names are case insensitive. For example, if you have two UNIX files "`Cat`" and "`CAT`" in the same directory, only one will be restored on a Macintosh.

- If a file is in MacBinary format, the Macintosh NetBackup client will restore it with its Macintosh attributes, data fork, and resource fork.

• If a file is not in MacBinary format, the Macintosh NetBackup client attempts to determine if it is a text file.

If it appears to be text, the file is restored as a SimpleText file. Otherwise, it will be restored as a plain binary file with Creator '????' and File Type '????'.

Why DNS is Required

NetBackup must be able to map host names (for example, `raistlin.null.none.com`) to IP addresses (for example, 129.1.2.3) and IP addresses to host names. A properly configured DNS allows NetBackup to do that.

`MacTCP` does have the option to use a local hosts file instead of DNS. This allows NetBackup to map host names to IP addresses, but because of a limitation in the `MacTCP` software, does not allow NetBackup to map IP addresses to host names.

Using NetBackup Browser $\quad$ 3

There are two ways to perform NetBackup operations. The system administrator can perform NetBackup operations on the master server. NetBackup operations can also be performed on-demand by a user with the NetBackup Browser.

This chapter describes how NetBackup is used by the system administrator and by the Macintosh user. The following major topics are covered.

- NetBackup and the Master Server
- NetBackup and the Macintosh Client User

NetBackup and the Master Server

Now that the NetBackup software has been installed on your Macintosh, files stored on the Macintosh can be backed up automatically by the system administrator.

Back Up or Archive

Your system administrator has configured the NetBackup servers on your network to periodically connect to your Macintosh and back up or archive some or all of your files.

Note: The NetBackup software runs in the background on your Macintosh. Your Macintosh must be turned on and ready in order for NetBackup to back up your files. Check with the NetBackup administrator to determine when backups will occur.

Restore

If you need any of your Macintosh files restored, you can contact your system administrator. The system administrator can start a restore of files to your Macintosh from the NetBackup master server.

NetBackup and the Macintosh Client User

The client user can also control NetBackup through the NetBackup Browser. This section contains a tutorial that will walk you through the following NetBackup operations

• How to Start the NetBackup Browser

• Backup or Archive Tutorial

• Restore Tutorial

For your convenience, these topics are included in the on-line Help for the NetBackup Browser.

In order to perform these operations, you must first complete the installation procedure described in "Installing NetBackup Browser" in the manual.

How to Start the NetBackup Browser

This section describes how to use the NetBackup Browser to perform backups, archives and restores. Every time you want to open the NetBackup Browser, use the procedure described in this tutorial.

1. Before you start, make a note of the file name(s) and the folder(s) in which your file is stored. For this tutorial you will backup the `Help.html` file stored in the `NetBackup 3.2 Browser` folder.

2. Double-click the `Macintosh HD` icon. A folder will open.

3. Double-click the `NetBackup 3.2 Browser` folder to open its window.

4. Double-click the `NetBackup` icon to launch the NetBackup Browser.

You have successfully started the NetBackup Browser. The following section will walk you through an actual backup.

Backup or Archive Tutorial

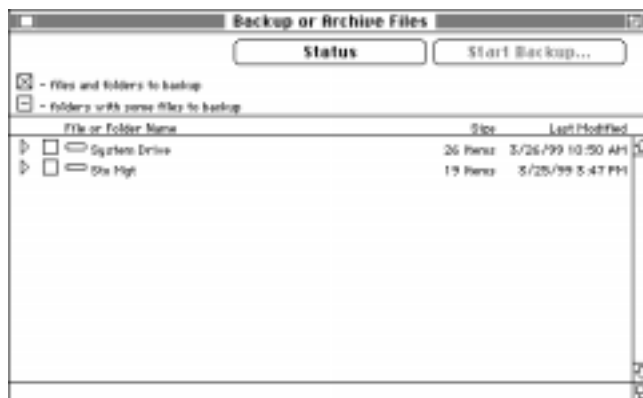The instructions in this section describe how to:

- Backup the `Help.html` File

- Monitor the Status of the Backup Operation.

Backup the `Help.html` File

1. Start NetBackup as described in "How to Start the NetBackup Browser" section of this tutorial to open its window.

2. Click **Chose Files to Backup or Archive...** to open its window.


The following window will appear.

Notice that the triangle to the left of the `Macintosh HD` volume is pointed to the right. This indicates that the folder is closed.

3. Click the triangle to open the folder. Notice that the triangle is now pointing down and contents of the `Macintosh HD` volume are displayed.

4. Scroll down until you find the `NetBackup 3.2 Browser` folder.

5. Click the triangle to open the `NetBackup 3.2 Browser` folder.
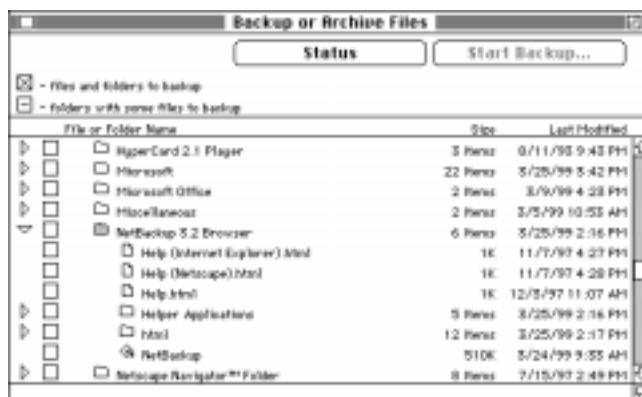
6. Find `Help.html` file.

    This file was loaded into the `NetBackup 3.2 Browser` folder during installation.
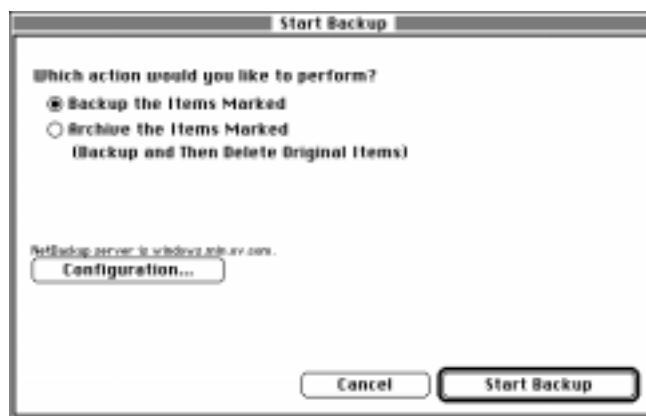
7. Click the `Help.html` file.
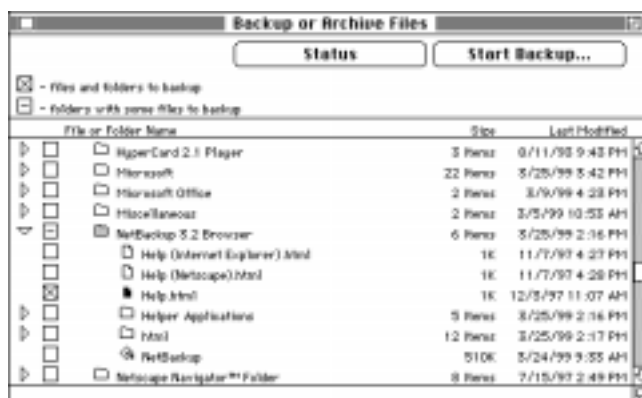
Notice that the check box preceding the file name now has an [X] in it. This means that the file has been selected. Notice also that the check box preceding the `NetBackup 3.2 Browser` folder name has a [-]. This means that something in the folder has been selected. If everything in the folder had been selected, you would see an [X] in the check box.

8. Click **Start Backup**.
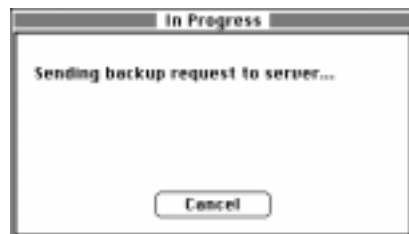
   The following dialog box will appear.

CAUTION! If you click **Archive the Items Marked** from this window, NetBackup will back up the `Help.html` file, then DELETE the original `Help.html` file from your Macintosh.

9. Click **Backup the Items Marked** radio button.

10. Click **Start Backup** to start the NetBackup operation.
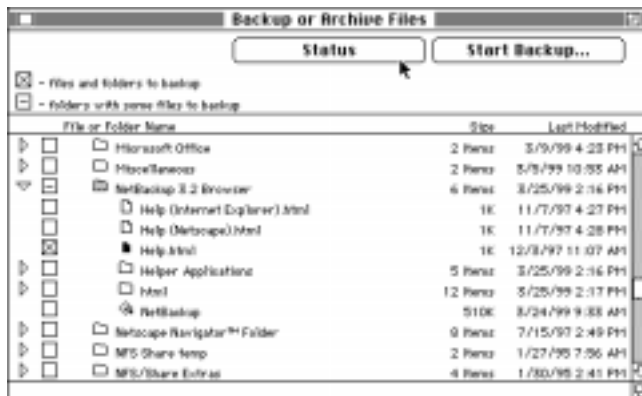
   The following dialog box will appear.

   The Macintosh will then return to the Backup or Archive Files Window.

NetBackup will start backing up a copy of the `Help.html` file. Since you selected Backup, not Archive, the original `Help.html` file will remain on your Macintosh.

Monitor the Status of the Backup Operation.

1. Click **Status** on the Backup or Archive Files Window.

The following window will appear.

Use this window to monitor the progress of the backup or archive operation. The operation is finished when the phrase `Completed successfully` is displayed. The **Details** button will display the selected log file of a NetBackup operation. You can view the log file while the operation is in progress, or after it is finished.

2. Double click the backup log.

   A log file similar to the following will display.

   The **Delete** button on the Status Window will delete the selected log file after the NetBackup operation is finished.

Note: You can also access the Status Window from the bar menu.

1. Start NetBackup.

2. Click and hold Window on the bar menu bar.

3. Drag the cursor down to highlight **Status**. The Status Window will appear.

Restore Tutorial

In this section you are going to restore the file named `Help.html`. This file was backed up in "Backup or Archive Tutorial" section of this tutorial.

The instructions in this section describe how to:

• Restore the `Help.html` File

• Monitor the Status of the Restore Operation.

Restore the `Help.html` File

1. Start NetBackup as described in "How to Start the NetBackup Browser" section the of this tutorial. The NetBackup Browser should be displayed.

2. Click **Chose Files to Restore...**.

The following dialog box will display.

An image list contains all files, directories and catalog information associated with a backup.

The Getting Image List display will then be replaced by the following.

A file list contains the list of files that NetBackup created when the backup was performed. This display will then be replaced by the following window.

Note: These status displays appear every time you start NetBackup and click **Start Restore**.
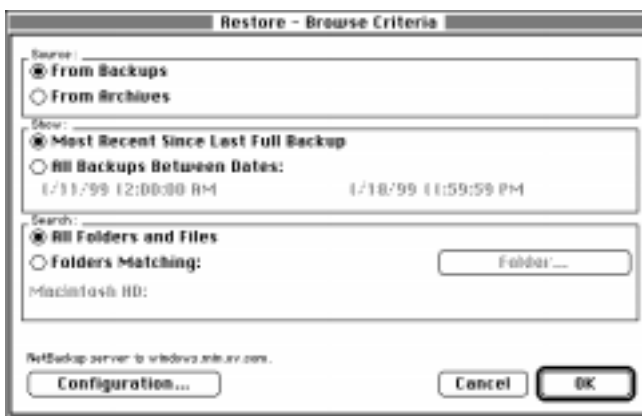
The following screen will appear.

At this point you have to indicate to NetBackup that you want to restore the `Help.html` file you backed up in "Backup or Archive Tutorial".

3. Click **Browse Criteria**.

The following dialog box will display.

The Restore - Browse Criteria Dialog Box is used to enter parameters for NetBackup restore operations. For these instructions, you are going to restore the `Help.html` file backed up in "Backup or Archive Tutorial".
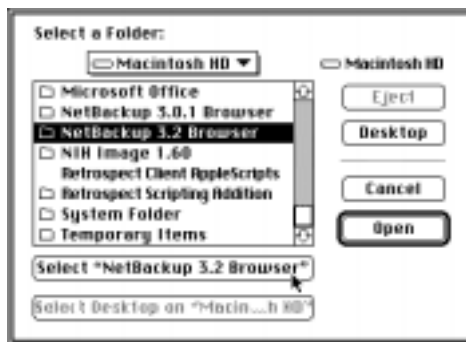
4. Click **Folders Matching** radio button.

This tells NetBackup that you are going to search for a particular file and/or folder.

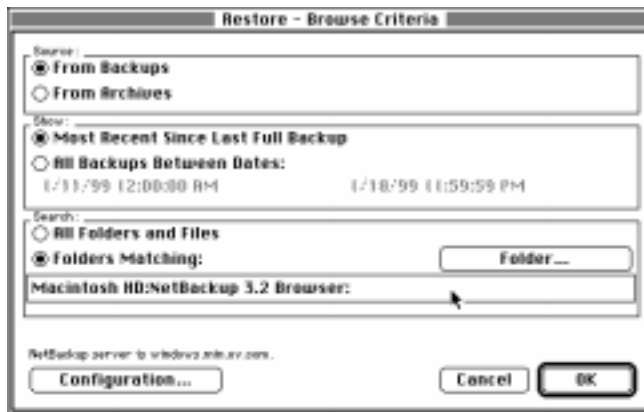5. Click **Folder...**.

   The following Macintosh dialog box will appear.

6. Click the NetBackup 3.2 Browser folder on the Macintosh HD.

7. Click the **Open** button.

   The following dialog box will appear.

   NetBackup will search for the most recent backups of the NetBackup 3.2 Browser folder.

8. Click **OK**.

The following window will display.

As a result of the browse criteria search, the NetBackup 3.2 Browser folder is included in the folder

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Note: For this tutorial, you searched for the `NetBackup 3.2 Browser` folder. You can be even more specific in your search and specify the `Help.html` file.

1. Click in the **Folders Matching** radio button in the Restore - Browse Criteria Dialog Box. The highlight will be removed and you will see a cursor blinking.
2. Use the right arrow key to scroll to the end of the line.
3. Type a colon (:).
4. After the colon, type the following: `Help.html`.
5. Click **OK**.

The search results will show the `Help.html` file under `NetBackup 3.2 Browser` folder.

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9. Click the triangle to open the `NetBackup 3.2 Browser` folder.

Notice that the triangle is now pointing down and the backed up contents of the Macintosh HD volume are displayed.

10. Click the `Help.html` file.

Notice that the check box preceding the file name now has an [X] in it. This means that the file has been selected. Notice also that the Macintosh check box and the `NetBackup 3.2 Browser` folder check box has a [-]. This means that something in the folder has been selected. If everything in the folders had been selected, you would see an [X] in the check box.

11. Click **Start Restore**.

The following dialog box will display.

12. Click the **Overwrite Existing Files** check box.

13. Click **Start Restore** to start the NetBackup restore operation.

The following dialog box will appear.

The Macintosh will then return to the Restore Files Window. NetBackup will start restoring the `Help.html` file.

Monitor the Status of the Restore Operation.

1. Click **Status** on the Restore Files window.


The following window will appear.
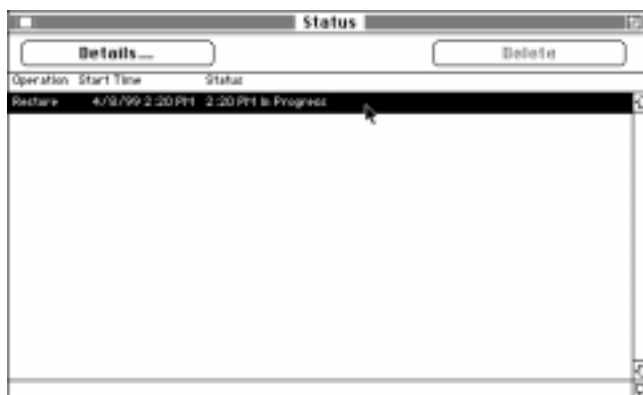
Use this window to monitor the progress of the backup or archive operation. The operation is finished when the phrase `Completed successfully` is displayed. The **Details** button will display the selected log file of a NetBackup operation. You can view the log file while the operation is in progress, or after it is finished.

2. Double click the restore log.

The following log file will appear.
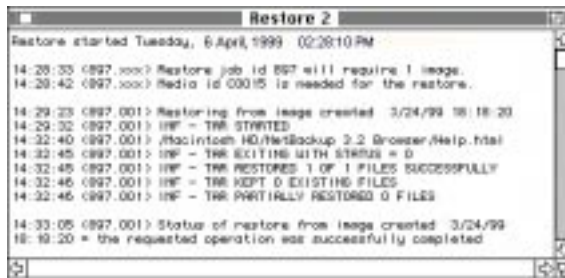
The **Delete** button will delete the selected log file after the NetBackup operation is finished.

Note: You can also access the Status Window from the bar menu.

1. Start NetBackup.
2. Click and hold **Window** on the bar menu bar.
3. Drag the cursor down to highlight Status. The Status Window will appear.

Reference 4

This chapter provides reference information on the NetBackup Browser. The topics contained here are:

• Menus

• Windows

• Dialog Boxes

Menus

The menus for the NetBackup Browser are active when the following windows are active:

- NetBackup Main Window
- Backup or Archive Files Window
- Restore Files Window
- Status Window

File Menu

Configuration
> Click this menu command to open the Configuration Dialog Box.

Browse Criteria
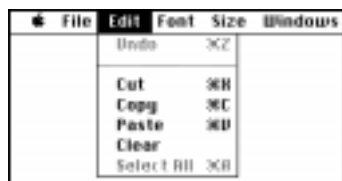> Click this menu command to open the Restore - Browse Criteria Dialog Box.

Quit
> Click this menu command to exit the NetBackup Browser.

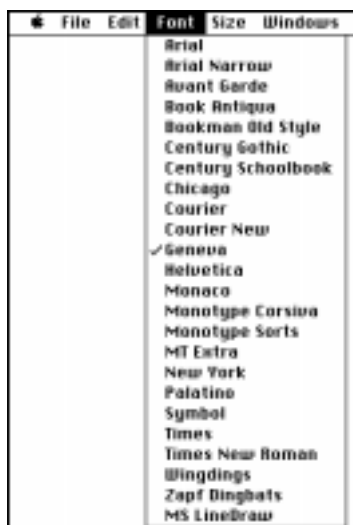### Edit Menu

Use the Edit Menu to modify text field contents.

Font Menu

Use the Font Menu to select the type of font used in the NetBackup displays.

Size Menu
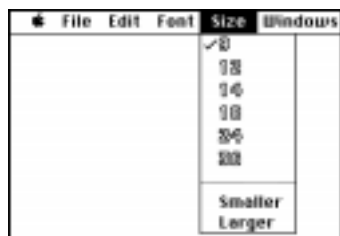
Use the Size Menu to change the size of font used in the NetBackup displays.

Windows Menu

Restore Files
> Click this menu command to open the Restore Files Window.

Backup or Archive Files
> Click this menu command to open the Backup or Archive Files Window.

Status
> Click this menu command to open the Status Window.

Backup Help
> Click this menu command to open the NetBackup Browser backup instructions in your default web browser. These instructions are identical to those in this manual.

Restore Help
> Click this menu command to open the NetBackup Browser restore instructions in your default web browser. These instructions are identical to those in this manual.

Windows

Use this section as a reference for NetBackup windows. Each window that you will see in the NetBackup Browser is illustrated, then followed by special instructions for its use.

Generally speaking, windows can be distinguished from dialog boxes by the close box in the upper left corner. The obvious exception to this is the NetBackup Main Window.

NetBackup Main Window

When you start the NetBackup browser, the NetBackup Main window appears.

When this window is displayed, the Menus are active.

Chose Files to Restore...
> Click this button to open the Restore Files Window.

Chose Files to Backup or Archive...
> Click this button to open the Backup or Archive Files Window.

Backup or Archive Files Window

This window shows the folders and files that you can mark for backup. To open this dialog box, click the **Chose Files to Backup or Archive...** button on the NetBackup Main Window.
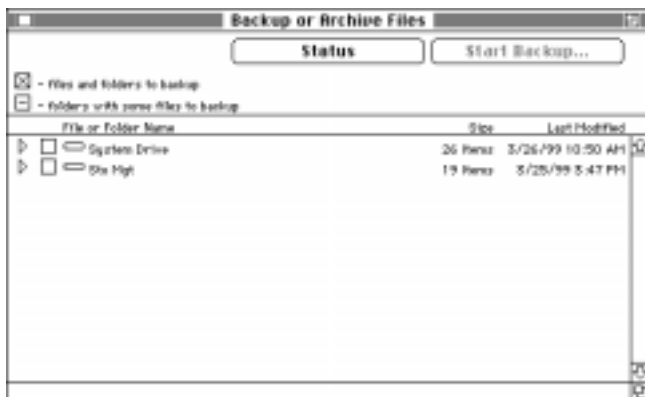
When this window is displayed, the Menus are active.

Status

Click this button to open the Status Window.

Start Backup

This button will remain inactive until a file and/or folder has been selected in the File or Folder Name section of this window. Click this button to open the Start Backup Dialog Box.

files and folders to backup

This is a display only. It indicates how the check box for a file or folder will look when selected. When a folder is marked this way, all files in that folder will be backed up.

folders with some files to backup

This is a display only. It indicates how the check box for a folder will look when some files, not all files, are selected.

File or Folder Name

> This area of the window contains a list of files and folders in the
> volume. The Size and the Last Modified time and date are also listed.
>
> The volume, and each folder, are preceded by a triangle. When the
> triangle to the is pointed to the right, the volume or folder is closed.
> When the triangle is pointing down, the volume or folder is opened.
> Click the triangle to open and close the volume and the folders.
>
> Each file and folder listing is preceded by a check box. Click on a
> check box to select or deselect and file or folder. When a check box
> preceding a file has an [X] in it, the *file* has been selected. When a
> check box preceding a *folder* has an [X] in it, all the files have been
> selected. When a check box preceding a folder has a [-] in it, only
> some of the files have been selected.

Restore Files Window

This window shows the folders and files that you can mark for restore. It contains only files and directories that were backed up. To open this window, click **Chose Files to Restore...** on the NetBackup Main Window.

When this window is displayed, the Menus are active.

Browser Criteria

Click this button to view the Restore - Browse Criteria Dialog Box.

Status

Click this button to open the Status Window.

Start Restore

This button will remain inactive until a file and/or folder has been selected in the File or Folder Name section of this window. Click this button to open the Start Restore Dialog Box.

files and folders to restore

This is a display only. It indicates how the check box for a file or folder will look when selected. When a folder is marked this way, all files in that folder will be restored.

folders with some files to restore

This is a display only. It indicates how the check box for a folder will look when some files, not all files, are selected.

File or Folder Name

> This area of the window contains a list of files and folders in the volume. The Size and the Last Modified time and date are also listed.

> The volume, and each folder, are preceded by a triangle. When the triangle is pointed to the right, the volume or folder is closed. When the triangle is pointing down, the volume or folder is opened. Click the triangle to open and close the volume and the folders.

> Each file and folder listing is preceded by a check box. Click on a check box to select or deselect and file or folder.

> When a check box preceding a file has an [X] in it, the file has been selected. When a check box preceding a folder has an [X] in it, all the files have been selected. When a check box preceding a folder has a [-] in it, only some of the files have been selected.

Status Window

The NetBackup browser records the results of each user-directed operation in a log. After starting the operation, you can view the client progress logs. The Status Window lists all progress logs currently residing on your system.

You can access this window by selecting the **Status** button on the Backup or Archive Files Window and the Restore Files Window.

When this window is displayed, the Menus are active.

Details

Click this button to view the Progress Log Window.

Delete

Click this button to delete the progress log highlighted in the Progress Log List.

Progress Log List

This list contains progress logs for all backup and restore operations. Each operation is listed, followed by the Start Time and the Status of the Job. To view a progress log, select one of the operations listed, then click **Details**.

Progress Log Window

This is a display only window. The following example is a progress log from a backup operation.

The following example is a progress log from a restore operation.

Dialog Boxes

A dialog box is a special type of window used in Macintosh applications to display information and receive input from the user. A control is a user interface item, such as a radio button or check box, that commonly appears in a dialog box.

Start Backup Dialog Box

Access this dialog box by clicking **Start Backup** on the Backup or Archive Files Window.

Backup the Items Marked
> Click this radio button to backup the files and/or folders marked in the Backup or Archive Files Window.

Archive the Items Marked
> Click this radio button to backup and then delete the files and/or folders marked in the Backup or Archive Files Window.

Configuration...
> Click this button to open the Configuration Dialog Box and change the NetBackup server configuration. The current server configuration is displayed immediately above the button.

Cancel

Click this button to close this dialog box without initiating a backup or archive of files and/or folders selected in the Backup or Archive Files Window.

Start Backup

Click this button to imitate a backup or archive of files and/or folders selected in the Backup or Archive Files Window.

Configuration Dialog Box

Access this dialog box by clicking **Configuration...** on the Start Backup Dialog Box, the Restore - Browse Criteria Dialog Box or from the File Menu.

If this dialog box is accessed from the File Menu, before a backup or restore operation is initiated, the following is displayed.
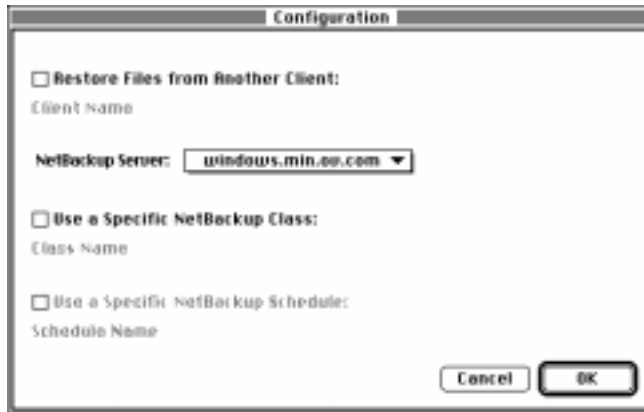
If this dialog box is accessed during a backup operation, only the **Use a Specific NetBackup Class:** radio button and text box will display.

If this dialog box is accessed during a backup operation, only the **Use a Specific NetBackup Class:** and **Use a Specific NetBackup Schedule:** radio buttons and text boxes will display.

Restore Files from Another Client:

> This radio button is displayed when the Configuration Dialog Box is opened during a restore operation. If the configuration on the NetBackup server allows it, you can restore files to your NetBackup client that were originally backed up by another NetBackup client.
>
> Clicking this radio button will activate the text box immediately below the button. When the text box is activated you can select the client name from which you want to restore files.

NetBackup Server:

> Use this pop-up menu to select a NetBackup master server for user-directed backups.

Use a Specific NetBackup Class:
> Use this radio button to specify the NetBackup class you want to use for user-directed backups. Clicking this radio button will activate the text box immediately below the button. When the text box is activated you can select the Class Name you want to use.

Use a Specific NetBackup Schedule:
> Use this radio button to select a NetBackup schedule for user-directed backups. Clicking this radio button will activate the text box immediately below the button. When the text box is activated you can select the Schedule Name you want to use.

Cancel
> Click this button to close this dialog box without implementing changes.
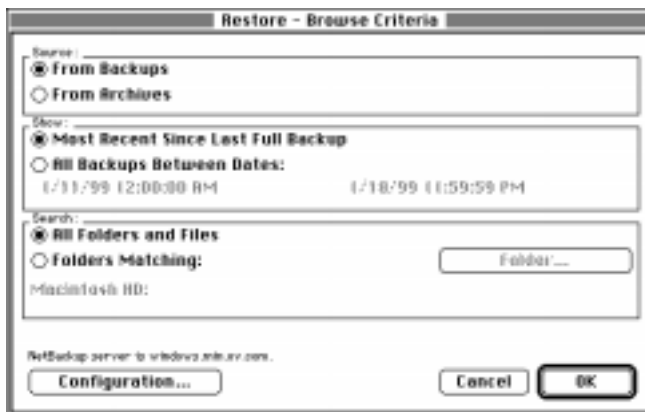
OK
> Click this button to confirm the setting and close this dialog box.

Restore - Browse Criteria Dialog Box

Access this dialog box by clicking **Browse Criteria** on the Restore Files Window or from the File Menu.

This dialog box is used to set parameters for the files and/or folders displayed in the File or Folder Name section of the Restore Files Window.

From Backups
> Click this radio button to list files that have been backed up.

From Archives
> Click this radio button to list files that have been archived. Archived files have been backed up, then deleted from the client.

Most Recent Since Last Full Backup
> Click this radio button to list the most recent files or folders since the last full backup. The resulting list will display only one listing, the most current backup, of a file or folder.

All Backups Between Dates:
> Click this radio button to generate a list of files and folders in the Restore Files Window which have been backed up or archived between specified dates. Clicking this radio button will activate the text box immediately below the button. When the text box is activated you can select the start date and the end date.
>
> NetBackup will search the range of backups between the start date and end date. By default, the start date will be the time of the last full backup and the end date will be 11:59 PM.

All Folders and Files
> Click this radio button to list all files and folders.

Folders Matching
> Click this radio button to specify the folder to list. Clicking this radio button will activate **Folder...** button and the text box immediately below the radio button. When the text box is activated you can select the folder to list.

Folder...
> Click this button to open the Macintosh Select a File: dialog box. From this dialog box you can select a folder to list. The selected folder will be displayed in the text box immediately below the radio button.

Configurations...
> Click this button to open the Configuration Dialog Box and change the NetBackup server configuration. The current server configuration is displayed immediately above the button.

Cancel
> Click this button to close this dialog box without initiating a restore of files and/or folders selected in the Restore Files Window.

OK
> Click this button to confirm the setting and close this dialog box. The File or Folder Name section of the Restore Files Window will list the files and/or folders specified by the parameters in this dialog box.

Start Restore Dialog Box

Access this dialog box by clicking **Start Restore** on the Restore Files Window.

Overwrite Existing Files

Click this check box to allow NetBackup to replace files and/or folders with identical names with those being restored.

Restore to Alternate Folder

Click this check box to restore files and/or folders to a different folder. Clicking this check box will activate **Folder...** button and the text box immediately below the check box. When the text box is activated you can select an alternate folder to restore to.

Folder...

Click this button to open a Macintosh dialog box from which you can select an alternate folder. The selected folder will be displayed in the text box immediately below the radio button. You can also create a new folder.

Cancel

Click this button to close the Start Restore Dialog Box, without initiating a restore of files and/or folders selected in the Restore Files Window.

Start Restore

Click this button to imitate a restore of files and/or folders selected in the Restore Files Window.

In Progress Dialog Boxes

The In Progress Dialog Boxes display during lengthy NetBackup operations involving the NetBackup server. They function as indicators to you that an operation is in progress. They also provide you with the option of cancelling the operation.

The following is an example indicates that the client is getting the image list from the server.

The following lists all operations which will be displayed in the In Progress Dialog Boxes.

• Sending backup request to server...

• Getting image list from server...

• Getting file list from server...

• Sending restore request to server...

Click **Cancel** to quit the process.

Glossary

administrator

a user that is granted special privileges to install, configure, and manage the operation of a system, network, or application.

alternate client restore

restores files to a different client than the one from which they were backed up. If the configuration on the NetBackup server allows it, you can restore files to your NetBackup client that were originally backed up by another NetBackup client.

archive

(verb) the act of backing up files and directories to a storage unit and then deleting the original files and directories.
(noun) a special kind of backup. During an archive, NetBackup backs up the selected files. If the backup is successful, these files are deleted from the local disk. In the manual, references to backups also apply to the backup portion of archive operations (except where otherwise noted).

archive bit

a file-status bit that the MSDOS operating system sets when it writes a file, thereby indicating that the file has changed.

back up

the act of copying and saving files and directories to storage media.

backup

the process of copying and saving files and directories to storage media. Also may refer to the backup image.

bp.conf file

a file that contains NetBackup configuration options.

class, NetBackup
　　　　　defines the backup policy for a group of one or more clients that have similar backup requirements.

client
　　　　　the system with the files to back up, archive, or restore.

compression
　　　　　the process of compacting data to enable more efficient transmission and storage.

configuration
　　　　　the parameters that govern the behavior of an application. This term can also refer to the manner in which a network or system is layed out or connected (for example, a network configuration).

cumulative-incremental backup
　　　　　scheduled by the administrator on the master server, backs up all files that have changed since the last successful full backup. All files are backed up if no prior backup has been done.

differential-incremental backup
　　　　　scheduled by the administrator on the master server, backs up all files that have changed since the last successful full or incremental backup. All files are backed up if no prior backup has been done.

exclude list
　　　　　a list that resides on the client and designates files to exclude from automatic backups.

full backup
　　　　　copies to a storage unit all files and directories that are beneath a specified directory.

host
　　　　　a computer that executes application programs.

hostname
　　　　　name by which a host computer is identified by programs and other computers in the network.

image, backup
　　　　　the collection of data that NetBackup saves for an individual client during each backup or archive. The image contains all the files, directories, and catalog information associated with the backup or archive.

include list
> a list that resides on the client and designates files for NetBackup to add back in from the exclude list.

incremental backup
> refers collectively to cumulative and incremental backup types for situations when either of them can be used. For example, configure your incremental backup schedules.

logs
> files where a computer or application records information about its activities.

master server, NetBackup
> provides administration and control for the backup of client data.

port
> (noun) a location used for transferring data in or out of a computer.
> (verb) to modify software so it runs on another type of operating system or platform.

privileges
> the tasks or functions that a user, system, or application is authorized to perform.

progress log
> logs that record user directed operations on   NetBackup.

restore
> (verb) the act of recovering selected files and directories from a previous backup or archive and returning them to their original directory locations (or to an alternate directory).
> (noun) the process of recovering selected files and directories from a previous backup and returning them to their original directory locations (or to an alternate directory).

schedules, NetBackup
> controls when backups can occur in addition to other aspects of the backup, such as: the type of backup (full, incremental) and how long NetBackup retains the image.

slave server, NetBackup
> allows NetBackup to access its attached storage units but administration and control comes from the master server.

tar

Tape ARchive, a program that   NetBackup uses to extract backup images during a restore.

timeout period

the period of time that an application has allotted for an event to occur.

TIR

see "True-Image Recovery."

True-Image Recovery

restores the contents of a directory to what it was at the time of any scheduled full or incremental backup. Previously deleted files are ignored.

user-directed operation

a backup, archive, or restore that is started by a person on a client system.

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